

BR78L05MAQ
Rev.A Dec.-2023

SOT-23

Voltage Regulator in a SOT-23 Plastic Package.

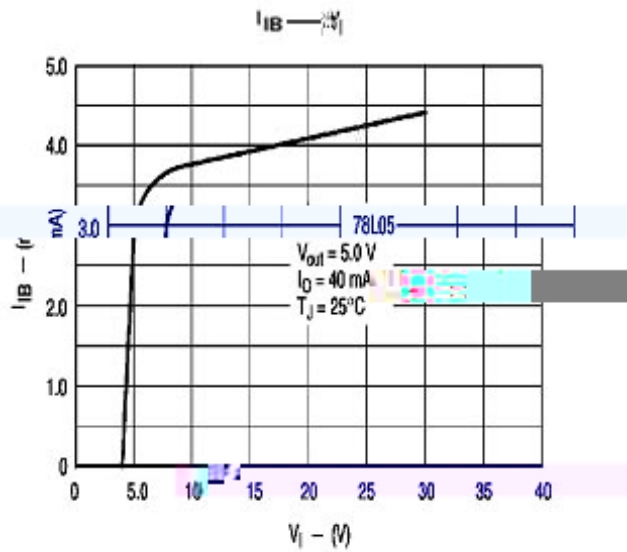
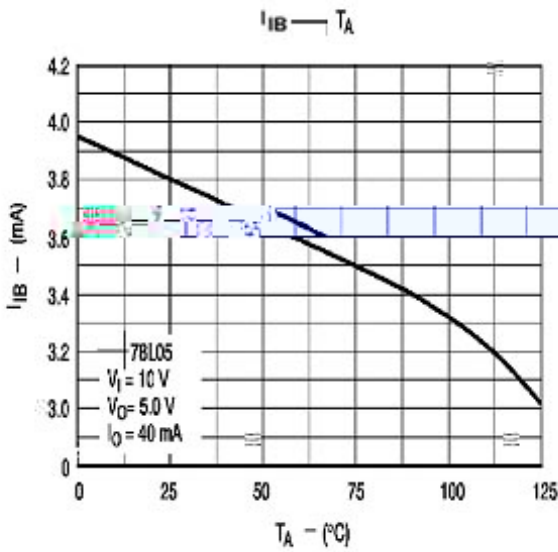
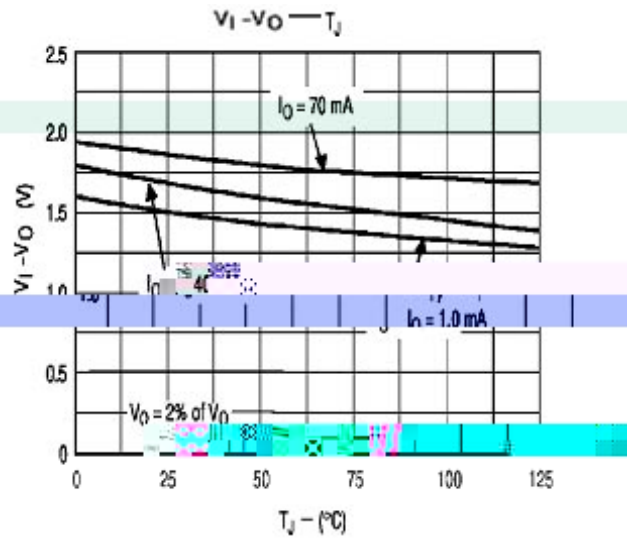
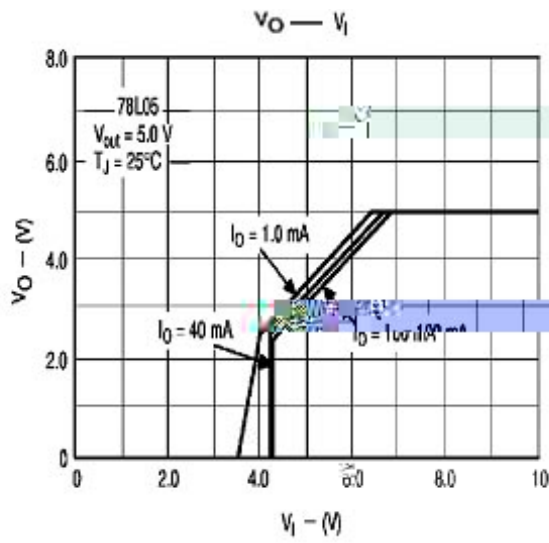
/ Absolute Maximum Ratings($T_a=25$)

Parameter	Symbol	Rating	Unit
Input voltage	V_i	30	V
Output current	I_o	100	mA
Operating virtual Junction temperature	T_J	-40 125	
Power Dissipation	P_D	350	mW
Storage temperature range	T_{stg}	-65 150	

/ Electrical Characteristics($T_a=25$ $V_i=10V, I_o=40mA$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_o	$I_o=40mA$ $T_j=25$	4.80	5.0	5.2	V
		$I_o=1mA$ to 40mA $V_i=7V$ to 20V	4.75	5.0	5.25	V
		$I_o=1mA$ to 70mA $V_i=10V$	4.75	5.0	5.25	V
Input regulation	V_o	$V_i=7V$ to 20V $T_j=25$		32	150	mV
		$V_i=8V$ to 20V $T_j=25$		26	100	mV
Output regulation	V_o	$I_o=1mA$ to 100mA $T_j=25$		15	60	mV
		$I_o=1mA$ to 40 mA $T_j=25$		8	30	mV
Ripple rejection	RR	$V_i=8V$ to 18V $f=120Hz$ $T_j=25$	41	49		dB
Output noise voltage	V_N	$f=10Hz\sim 100KHz$ $T_j=25$		42		V
Dropout voltage	V_D	$T_j=25$		1.7		V
Bias current	I_q	$T_j=25$		3.8	6	mA
		$T_j=125$			5.5	mA
Bias current change	I_q	$V_i=8V$ to 20V			1.5	mA
		$I_o=1mA$ to 40mA			0.1	mA

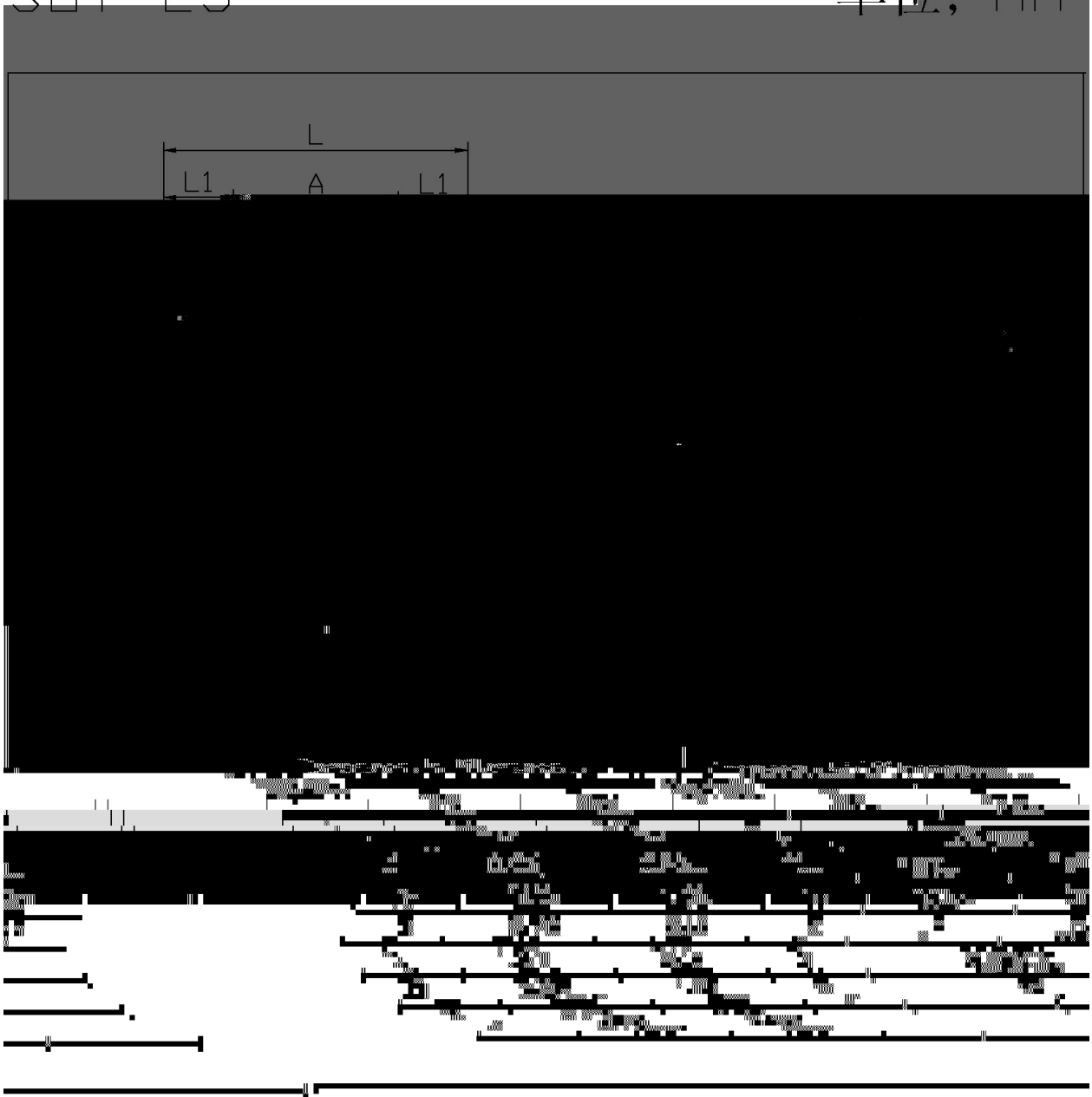
/ Electrical Characteristic Curve



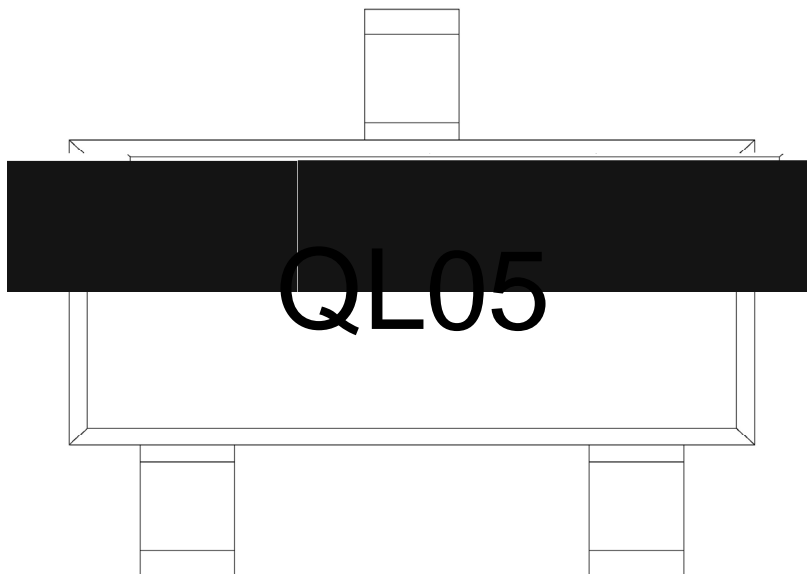
/ Package Dimensions

SOT-23

单位: mm



/ Marking Instructions



Q

L05

Note:

Q: Automobile halogen-free product Code

L05: Product Type Code

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- 1 150 ~ 200 60 ~ 120sec; 1.Preheating:150~200 , Time:60~120sec.
- 2 255±5 5±0.5sec; 2.Peak Temp.:255±5 , Duration:5±0.5sec.
- 3 2 ~ 10 /sec. 3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ REEL